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"Gossipyboma" a retained post-operative intra-abdominal surgical sponge can lead to septicemia and septic shock: A case report

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ABSTRACT

Objectives: This case report was reported as a rare case of post-surgical complication to reduce the incidence of occurrence of this near miss which can lead to sentinel event and death in such patients. **Background:** A retained post-operative foreign body inside the abdomen is a considered one of the common faults of the surgical team which can lead to infection and sepsis. **Methods:** We were working as a surgical team in a tertiary hospital and we noticed on 9th of January 2022 a retained intraabdominal sponge 4 months after an open laparotomy hernia operation with mesh repair for a 61 years old patient who admitted with infected gauze, peritonitis and septic shock due to the forgotten inflamed gauze which was diagnosed accidentally by abdominal CT as "Gossipyboma". Emergency laparotomy done, septic shock was managed and the patient condition is now stable. The case was consented for study and IRB obtained (89-45/KKJB23/89-2021). **Results:** We conducted a root cause analysis and recommended for Radiofrequency Detection Technique use in Operative Room to by Pass Human factors big role, save time consumed in looking for missed item & avoid extended LOS resulted from harm. **Conclusion:** Strict Adherence to Hospital wide policies and procedures with periodic awareness and use of modern technology is a strict requirement to reduce human errors in such patients. Also a routine abdominal CT should be done post operatively to exclude gauze retention.

Keywords: Gossipyboma, Retained, Post-Operative, Intra-Abdominal, Surgical, Sponge, Septicemia, Septic Shock.

1. INTRODUCTION

"Gossipyboma" is a name used to designate a cotton-based foreign body that is hidden after surgery. We reported a case of transluminal migration of a surgical sponge after prior surgery in a patient who arrived to our outpatient clinic with right iliac fossa discomfort and evidence of subacute blockage

(Lauwers & Van, 2000). Forgetting about a foreign body in the abdomen is a painful and preventable condition (Prasad et al., 1999). Surgeons may choose not to disclose these incidents for fear of legal repercussions and negative publicity (Jae et al., 2006). We conducted this case report in our hospital since 2019 till the date of issuing this report (6th February 2022). The incidents of Unintended Retained FB reached $9/32 \approx 29\%$ i.e. More than Quarter of the Sentinel Events (Including 2 occurrences of Missed Gide wire).

2. CASE REPORT

A 61 y old lady is a case of diabetes Miletus, hypertension, dyslipidemia and hypothyroidism.

1st admission: (this admission lasts five days from 29th of August till 2nd of September 2021)

On 29th of August patient was admitted to emergency room complaining of localized bulge in the lower abdomen. On 30th of August 2021, patient underwent Open Abdominal incisional Hernia Repair with Mesh. The operation was done successfully without intraoperative or anesthesia complication. The surgery lasted for 15 minutes from time of incision till suturing. In the initial count the absence of the gauze was not mentioned in the documentation however it was mentioned in the 2nd and final count (It was a "30mmx30mm" white sterilized disposable sponge) Figure 1. However, on day two post-operative the patient was discharged home in a good condition. After that she had two surgeries as out-patient visits (on 6th and 13th of September 2021 for sutures removal, Seroma was found in the 2nd visit for follow up).

| | |
|-------------------------------------|---|
| Items included in the Initial Count | 4/4 Raytec Gauze, 4/4 Raytec Gauze, Atraumatic Needle, Blade, Instruments |
| Items included in the Second Count | 30*30 Sponges, 4/4 Raytec Gauze, Atraumatic Needle, Blade, Instruments |
| Final Count Status | Correct |

Figure 1 initial, second and final counts of the disposable sterilized items in the operative theater: as shown the gauze was mentioned in the second and third count only.

2nd admission (lasted for three days) from 8th of October – 10th of October 2021)

On Day 38 postoperative, patient was admitted under General Surgery through Emergency Medicine Department as a case of Surgical Site Infection with active pus discharge complaining of Surgical Site discharge for one-week duration with right Lower abdominal pain. Bedside irrigation and drainage were done with Dressing, antibiotics and pain medications. Patient discharged in fair condition for follow up on 10th of October 2021. Right Shoulder X- ray was requested for pain. After that, patient underwent outpatient dressing changes in three separate visits because of pus discharge from the surgical site and abdominal distention, the 1st and the 2nd on 18th and 25th of October 2021. She still complaining of pain. On examination she had mild swelling at incision site and the impression was recurrent seroma. She was advised to use abdominal binder. In the 3rd follow up visit in out-patient department on 22nd of November 2021 Patient had constipation and she was instructed for diet modification & to use abdominal binder.

On 29th of December 2021 (1st ER visit post 2nd Discharge)

She came complaining of pain and pus discharge (yellowish) for 3 days. She was seen by emergency resident who discussed the case with general surgeon who noticed the patient came with same complaint multiple times before. On examination he noticed no signs of infection, mild tenderness and wound culture was negative. Cleaning done with irrigation and light packing was applied. However, he discharged the patient on Augmentin for 10 days and to be followed with dressing clinic and wound care education.

On 3rd of January 2022 (4th out-patient visit -post 2nd Discharge): the patient came with purulent wound discharge. The general surgery impression at that time was “Mesh infection with possible intra-abdominal collection”, and he requested CT abdomen/pelvis to rollout collections.

On 9th of January 2022 (5th outpatient visit -post 2nd Discharge)

CT Abdomen and Pelvis done are shown in figure 2. CT abdomen and pelvis showed a large well-defined structure with multiple air-foci within SC fat could be related to packing, suggestive of GossiPyboma. Surgical sponge or a laparotomy pad left involuntarily in the body after a surgical procedure Fat-containing umbilical and paraumbilical hernias without compromise.

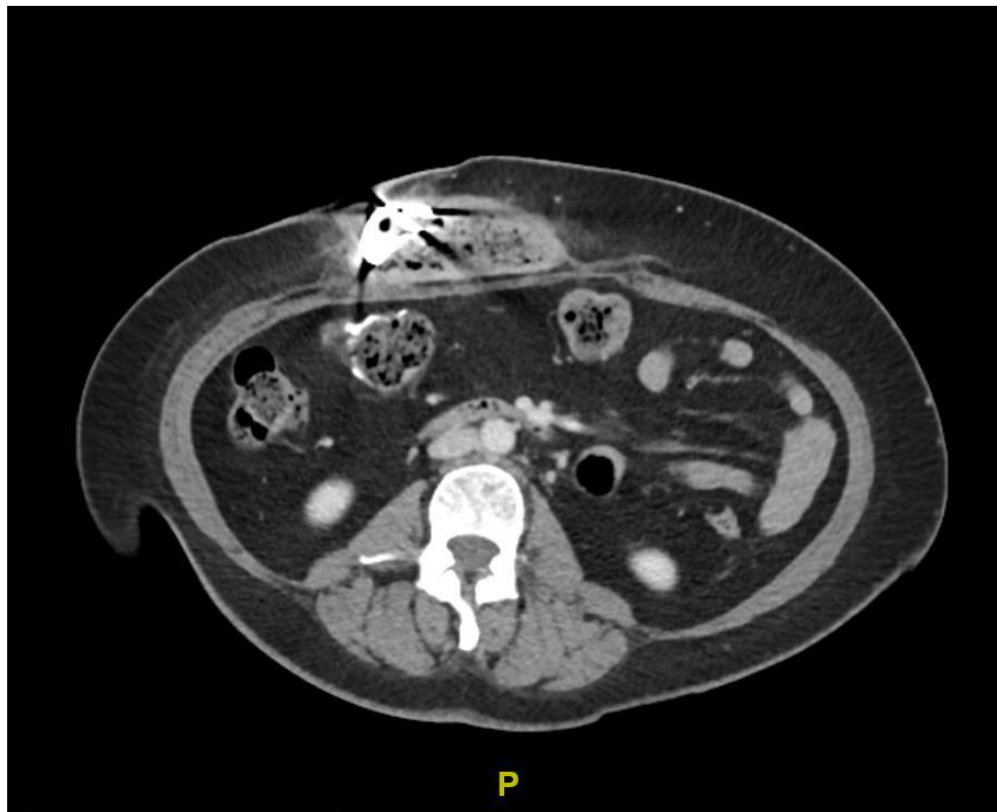


Figure 2 A large well-defined structures with multiple air-foci within SC fat could be Related to packing, suggestive of “GossiPyboma”

3rd admission

On 11th of January 2022 the patient was assessed by general surgery and the team decided that there was an abdominal wall collection for wound exploration, possible for mesh removal and washout laparotomy. On 13th of January 2022 (Pre-anesthesia Evaluation) ASA Class II. Patient underwent Removal of Infected Mesh; 30x30gauze was found inside severely adherent and fibrosed granulomatous swelling to underlying mesh and taken out (Figure 3, 4). On day 3, patient was discharged home fine with medication & appointment.

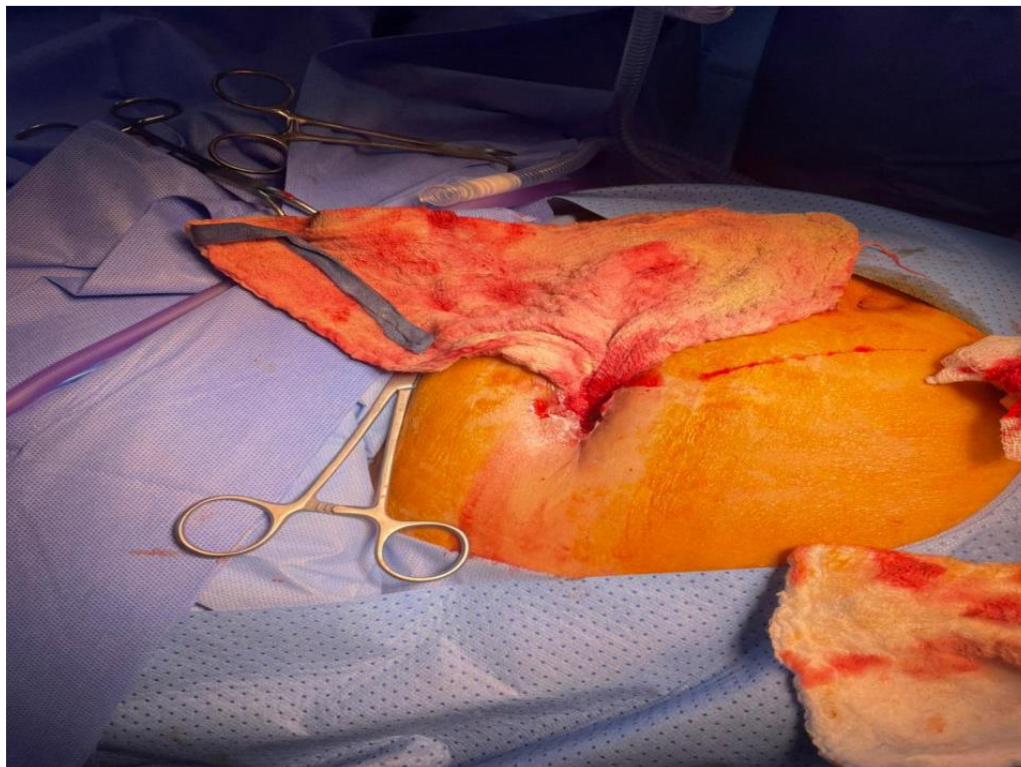


Figure 3 gross pathology of Gossipyboma (ventral view)



Figure 4 gross pathology of Gossipyboma (Dorsal view)

3. DISCUSSION

Gossipyboma is a name used to designate a foreign body made of cotton (Latin -Gossipyum) that is at the location of concealment (Swahili) after surgery (Lauwers & Van, 2000). Intraperitoneal elapsed foreign bodies (FB) are liable to forming adhesions, encapsulating, or eliciting an exudative reaction, with or without microbial infection. Frequently, a process of self-expulsion begins. This is also factual for GossiPybomas and surgical sponges that have become lodged. Presentation might be as a pseudo tumoral, occlusive, or septic illness; nevertheless, numerous instances have endured asymptomatic for decades. Ultrasonography and radiology (particularly computed tomography) are important in the identification of GossiPybomas; MRI is a less often employed modality. Plain radiography detection is challenging. A hyperreflective-mass with a “hypoechoic rim” and a significant posterior shadow is seen on ultrasonography. A well-defined bulk with interior heterogeneous densities is seen by computed tomography. Therapy comprises of surgical removal of the FB as well as resolution of associated consequences.

The foreign body's inflammatory response erodes and perforates the gut wall. Foreign body migration occurs via the hole, and additional progressive migration occurs through peristaltic activity until it becomes caught at the “ileocecal-junction” (ICJ). If it passes past the ileocecal junction, it is either retained in the “colon” or ejected through the rectum. If it is in the colon, it may be milked out manually via the rectum. Retained sponges are often asymptomatic, but they may lead to the growth of an abscess, a fistula, or an obstruction. Radiolucent materials, such as sponges, cause diagnostic issues and clinically resemble numerous abdominal diseases (Prasad et al., 1999). With the introduction of spiral CT, MRI, and specialized ultrasonography, physicians are now able to detect these foreign things. Spontaneous transluminal migration and ejection of sponges via rectum is also conceivable. The best strategy to preventing this problem is to adopt preventative measures such as rigorous counting of surgical material and regular usage of surgical textile material coated with a radio opaque marker (Jae et al., 2006). A retained surgical sponge happens at a frequency of one in every 100–3,000 procedures (Zantvoord et al., 2008). The intestine is the most communal site of migration (75 percent), however migration into the stomach and bladder has also been documented. Only 6% of instances report a sponge being ejected naturally via the rectum, whereas more than 93% need re-intervention.

In a recent retrospective assessment, sponges accounted for 69% of retained foreign bodies, whereas surgical tools accounted for 31%. The abdominal cavity (54 percent), vagina (22 percent), and thorax were the most prevalent places (7.4 percent). Retention is identified at a median of 21 days post-operatively; however it may occur up to 6.5 years later (Hung et al., 2007). Emergency surgery (RR=8.8) is-one-of-the risk factors for retention. Unexpected process changes (RR=4.1) Obesity is number three.

4. CONCLUSION

A strong index of doubt is essential to diagnose a case of retained sponge in a timely manner. Preventing accidents is as simple as properly inspecting the operating field for any retained sponge, instrument, or other object. Adopting a highly comprehensive swab and instrument counting procedure is critical.

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Author Contributions

Regarding manuscript work & production; Mounira and Mahdya treated the patients, and Abdulaziz wrote the manuscripts. Saif Marzouq supervised the work.

Informed consent

Written & Oral informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

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Conflicts of interest

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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